

Appl. No. 10/068,779
Amdt. Dated October 14, 2005
Reply to Office action of July 15, 2005
Attorney Docket No. P14518-US2
EUS/J/P/05-3257

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of supporting delivery, from a server to an application, of a data stream associated with a service provided by the server, comprising:

selecting the server;

requesting the service provided by the server; and

automatically and without manual intervention, providing a proxy path between the server and the application for communicating the data stream to the application, wherein the proxy path is a communication path and comprises a plurality of proxies, the plurality of proxies being concatenated together to form a proxy chain with an input of each proxy being connected to an output of each preceding proxy, and

performing a proxy operation on the data stream during the delivery of the data stream to the application, wherein the proxy operation processes the data stream according to the characteristics required for communicating with the application in a communication path that is to be used for said delivery a proxy that performs a proxy operation on the data stream during said delivery, including selecting the proxy on a server side of the communication path.

2. (Currently Amended) The method of Claim 1, wherein said proxy path comprises one proxy, step of selecting the server includes requesting the service from an application side of the communication path.

3. (Currently Amended) The method of Claim 1 [[2]], wherein said step of providing the proxy path includes configuring the proxy chain to provide the

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~~requested service, includes selecting the proxy includes selecting the proxy in response to said requesting step.~~

4. (Currently Amended) The method of Claim 3, ~~wherein said further comprising the step of~~

~~configuring the proxy path selecting the proxy includes selecting the proxy based on information indicative of at least one of a preference of the application, a characteristic of equipment that will receive the data stream, and a characteristic of the service.~~

5. (Currently Amended) The method of Claim 1 [[4]], ~~further comprising the steps of wherein said providing step includes~~

~~sending from the server side to a proxy execution server a request to install the proxy chain in the proxy communication path, the proxy execution server installing the proxy chain thereon in response to said installation request, and coupling the proxy execution server into the proxy communication path.~~

6. (Currently Amended) The method of Claim 5, ~~wherein said coupling step includes further comprising the steps of~~
~~the proxy execution server~~

~~downloading selected proxy modules from proxy repositories and providing an input network service point, an output network service point and a proxy cradle, all for handling proxy-to-proxy communication within the proxy chain.~~

~~allocating input and output ports to be used for coupling the proxy execution server into the communication path and sending to the server side of the communication path information that identifies the input and output ports.~~

7. (Currently Amended) The method of Claim 6, ~~wherein said further comprising the proxy execution server~~

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allocating the necessary network service points for the associated proxy chain enabling the proxy chain to listen for connections and wherein the service points are TCP sockets or UDP sockets.

~~input and output port information includes information that identifies one of input and output TCP sockets and input and output UDP sockets.~~

8. (Currently Amended) The method of Claim 1, wherein each of the concatenated proxies are designed as general-purpose proxy service modules and do not require direct communication to the server or the application. 3, wherein said step of selecting the proxy includes selecting a plurality of proxies on the server side of the communication path in response to said requesting step.

9. (Currently Amended) The method of Claim 1, [[8,]] wherein said providing step includes sending from the server side of the proxy communication path to each of a plurality of proxy execution servers a request plurality of requests to install a proxy or concatenated proxy chain from each of the plurality of proxy execution servers in the proxy path, the plurality of proxies in the communication path.

10. (Currently Amended) The method of Claim 9, wherein said step of sending the request to each of the plurality of proxy execution servers requests includes sending the requests in parallel.

11. (Currently Amended) The method of Claim 9, including the proxy execution servers

installing the respective proxies or proxy chains thereon in response to the respective installation request requests, and

the proxy execution servers sending to the server side of the proxy path communication path information that identifies input and output ports to be used for coupling the respective proxy execution servers into the proxy path communication path.

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12. (Previously Presented) The method of Claim 11, wherein said installing step includes the proxy execution servers installing the respective proxies in parallel.

13. (Previously Presented) The method of Claim 12 14, wherein said step of sending input and output port information includes the proxy execution servers sending their respective input and output port information to the server side in parallel.

14. (Currently Amended) The method of Claim 11, wherein said providing step includes forwarding from the server side of the proxy path communication path to one of the proxy execution servers the input port information that was sent to the server side by another of the proxy execution servers.

15. (Previously Presented) The method of Claim 14, wherein said forwarding step includes, for each of the proxy execution servers, forwarding from the server side to the proxy execution server the input port information that was sent by another of the proxy execution servers.

16. (Previously Presented) The method of Claim 1, wherein said proxy operation includes one of data compression, data encryption, data transformation, data transcoding and data caching.

17. (Currently Amended) A system for supporting delivery, from a server to an application, of a data stream associated with a service provided by the server, comprising:

an input for receiving a service request; and
a proxy provider apparatus coupled to said input and responsive to the service request for automatically, and without manual intervention,

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providing a proxy path between the server and the application for communicating the data stream to the application, wherein the proxy path is a communication path and comprises a plurality of proxies, the plurality of proxies being concatenated together to form a proxy chain, with an input of each proxy being connected to an output of each preceding proxy, for performing a proxy operation on the data stream during the delivery of the data stream to the application, wherein the proxy operation processes the data stream according to the characteristics required for communicating with the application.

~~providing in a communication path that is to be used for said delivery a proxy that performs a proxy operation on the data stream during said delivery, said proxy provider apparatus including a portion of said server that is operable for selecting the proxy.~~

18. (Currently Amended) ~~The system of Claim 17, wherein said proxy path comprises one proxy, portion of said server is operable for selecting the proxy in response to the service request.~~

19. (Currently Amended) ~~The system of Claim 17 18, wherein said proxy provider apparatus includes a proxy execution server coupled to said portion of said server to receive therefrom for receiving a request to install a specific proxy in the proxy path and the proxy execution server being operable for installing the requested specific proxy. a request to install the proxy in the communication path, said proxy execution server operable for installing the proxy thereon in response to said installation request.~~

20. (Currently Amended) ~~The system of Claim 19, wherein said proxy provider apparatus includes a proxy repository for storing proxies therein, said proxy execution server coupled to said proxy repository and operable to download the stored proxies therefrom. the proxy from said proxy repository.~~

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21. (Currently Amended) The system of Claim 19, wherein said proxy execution server is operable for

providing an input network service point, an output network service point and a proxy cradle; all for handling proxy-to-proxy communication within the proxy chain, and said portion of said server are co-operable for coupling said proxy execution server into the communication path.

22. (Currently Amended) The system of Claim 21, wherein said proxy execution server is operable for allocating necessary network service points for the associated proxy chain thereby enabling the proxy chain to listen for connections, wherein the service utilizes TCP sockets or UDP sockets.

~~input and output ports for use in coupling said proxy execution server into the communication path, said proxy execution server further operable for sending to said portion of said server information which identifies the allocated input and output ports.~~

23. (Currently Amended) The system of Claim 18, ~~said portion of said server is operable for selecting a plurality of proxies in response to the service request, said proxy provider apparatus including a plurality of proxy execution servers for receiving requests to install proxies in the proxy path, each of the plurality of proxy execution servers operable for installing respective proxies therefrom in the proxy path, coupled to said portion of said server for receiving therefrom respective requests to install at least one proxy in the communication path, said proxy execution servers operable for installing respective proxies thereon in response to the respective installation requests, each said proxy execution server further operable for sending to the proxy provider apparatus said portion of said server information which identifies input and output ports to be used for coupling the respective proxy execution server into the proxy path communication path.~~

24 - 55. (Canceled)

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56. (New) The system of Claim 17, wherein each of the concatenated proxies are designed as general-purpose proxy service modules and do not require direct communication to the server or the application.

57. (New) The system of Claim 19, wherein the proxy provider apparatus further comprises means for sending requests for proxies, in parallel, to respective proxy execution servers.

58. (New) The system of claim 19, wherein the proxy execution servers comprise means for installing the respective proxies in the proxy path in response to the respective installation requests and

the proxy execution servers sending to the server side of the proxy path information that identifies input and output ports to be used for coupling the respective proxy execution servers into the proxy path.

59. (New) The system of claim 58, wherein the proxy execution servers include means for installing the respective proxies in parallel in the proxy path.

60. (New) The system of claim 17, wherein the means for performing a proxy operation means for performing data compression, data encryption, data transformation, data transcoding and data caching.